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PARASITES.

The Cause of Contagious and Epidemic Diseases,

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It cannot be doubted that diseases of a malarial, epidemic or contagious character, are derived from some species of living organism or parasites of vegetable origin, floating in the atmosphere and capable under certain circumstances to act as a virus on the human body if applied to lining membranes or other parts. We know that there is animal and vegetable life in the atmosphere as well as in the water and other media. The microscope has clearly disclosed the vast domain of life to which infusoria belong, a comparatively new world of organized and active beings. A great many of those animalcules and fungi species act as poison or are causes of disease on particular parts of the body exposed to their influence, and therefore must be considered of great pathological importance, forming a special agency in causation of many diseases, of malarial, epidemic or contagious character. We indeed possess no reliable knowledge or information regarding the causes of disease which could supersede this theory, lately strengthened by undeniable facts. Bacteriæ existing or floating in the atmosphere act, as stated before, under particular circumstances as a virus on the human body as soon as they come in contact with lining membranes or other parts; their power of affecting the body is in proportion to their number and minuteness. We know that animal matter of certain kinds, applied to absorbing surfaces, may produce

the most virulent symptoms of disorder, locally or generally, according to the nature of the virus, its intensity, or the relation of the texture to other parts of the system; virus of hydrophobia or snake bite confirms our statement. In cantharides we have also a solitary example of their application for medical purposes and at the same time remarkable instance of virulent action of insect poison on internal membranes. Whatever is true or peculiar as to the habits of insects or the forms of animalcule life, obvious to our senses, is surely also applicable to those whose minuteness removes them further from our observation. The epidemic tendency to carbuncles or boils at certain places and certain times is dependent, not on causes from without, but on some virus or form of organic life, thus acting on the particular textures affected; the singular uniformity of the appearance, the definite course if not interrupted, and the total absence of constitutional disorder confirms this opinion. Glanderous matter of horses is producing the same disorder in man. Diphtheritic expectoration, coming in contact with the healthy mucous membrane will always produce diphtheria; the singular effect upon others from inoculation, even with the smallest form of morbid matter are well known. We also see poisonous qualities of animal matter, virus, produced after process of decomposition, after death. The evidence varies in kind but seems to be conclusive in general. The existence of germs or organism in the blood and tissues, is sufficiently demonstrated. Certain forms of these organisms are always present in certain diseases, but such forms are not found if that disease does not exist. Therefore, will (with very few exceptions,) inoculation, of a special class of parasites, always produce the same disease in other individuals. The existence of a special, malarial, cholera, diphtheria, scarletina, erysipelas, syphilis or small-pox bacteriæ cannot be doubted, and has been recognized by our best medical authorities; the result of this inter-penetration of life in different forms very often compatible with perfect health, are in many other instances direct causes of morbid action, and changes which constitute disease. Symptoms of such disorder are derived, partly from the progressive changes incident to the affecting cause, partly from the vital or other actions of the recipient. Certain atmospheric and other influences or conditions are of course absolutely necessary to the generation of certain vegetables, or animalcule minute parasites. Therefore, cholera, diphtheria, small-pox, typhoid fever, scarletina, and many other so called epidemic

or contagious diseases, may be absent for many years at some place but will appear again at once, without warning, and spread like wild fire over certain parts of the country. We see a similar phenomenon of endless swarms of insects, from time to time as they appear, *e. g.*, grasshoppers, locusts, etc., devastating large tracts of land, and taking their departure as quickly and with no more warning than they gave of their arrival. In connection with these remarks I may call your attention to a striking instance of the seventeen year locusts, where a period of seventeen years intervenes, between the hatching and the appearance of the insect; and if complete animal organization, such as that of infusoriæ or the vibriones of wheat, is capable of being restored to vital activity after long apparent extinction, still more may animal ova be supposed retentive of the principle of life and reproduction. The development of parasite or baccilla, if you please, after the place of subsistence has been found within some tissue or organ or on the surface of the body is going on very rapidly and we almost never know about their existence, until quite an extensive, organic destruction has taken place, which organic destruction, the consequence or product of parasites often requires more attention, by diagnostical judgment and skill in regard to treatment than the parasite himself, who soon after he committed as much mischief as possible, unceremoniously disappeared, (*e. g.* incysted trichnæ.) The smaller the parasite, the shorter his life. "IN TIME OF PEACE, PREPARE FOR WAR;" if we only could be posted in time of the arrival of those little devils, intending to destroy our health and very often our life, we would be most always victorious, and successful in fighting those concealed enemies. We have today, already, a complete, powerful and almost infallible therapeutical armory with which we can paralyze or kill the enemy every time, if used in time. Quite a number of remedies are destructive and specific in their action, on certain parasite species; there is a very close relation as to the origin of parasitic disease and treatment or prevention. The requisitions in common are, the discovery of means to prevent the access of the cause. Further, a judicious prophylactic treatment is the most important and valuable one, as soon as any epidemic, contagious parasitic disease make their appearance.

We have a number of specifics, capable of obviating the virus when received and remedies adequate to sustain the body under its influence, (that is the virus,) restoring the nervous power of the vital

organs, which are so rapidly and deeply affected by those diseases.

Inneculation frequently tried as preventive has proved, I think, extremely doubtful and deficient in its results and has given no more absolute protection than vaccination against small-pox, but will be followed likewise by the same permanent destruction of health, inneculation of syphilis, scrofulosis, etc., Prophylactic treatment has surprisingly in all such diseases never received that amount of consideration, by boards of health, it so well deserves. I may, in one case, at least, personally vouch for a very happy result. Almost constantly, in active service during the war from 61 to 65, I contracted rheumatism and suffered from it severely, until 1876, over ten years. I concluded to make a persevering effort to relieve myself more permanently, if possible, from this distressing plague and deprive, if possible, the good people the pleasure of laughing at the unfortunate doctor, who may cure others, but not himself. I indulged, sick or well since 1876, every night in a pill containing corrosive sublimate 1-100th grain, quinine 2 grains, cholchicum and one drop creosote. From that time on, until to-day, my fellow citizens have not had the least opportunity to express their sympathy, by laughing.

Remedies which have evidently proved reliable in diseases should by all means be used prophylactically, whenever such diseases approach us in epidemic form. We possess quite a number of remedies on whose reliable effect as anti-parasitics, we can rely to a great extent. For instance quinine, corrosive sublimate, iron, iodine, salicyle, sulphur, tobacco, alcohol, camphor, creosote, etc. The direct and specific effect of corrosive sublimate in syphilis, alcohol in snake bite; iron and iodine in erysipelas cannot be denied. It was also the iodine alone undoubtedly, which in former times contained in crude, cod liver oil, proved a valuable remedy in tuberculosis. The purified cod liver oil will gain a reputation in future only, as a generator of indigestion and dyspepsia. To find specifics for every species of parasite; every parasitic disease, in my mind is only a question of time. Why should it not be possible, that we find a reliable antidote against the poison of hydrophobia, as we possess today in alcohol in snake bite. The day may not be very far distant when Pasteur's glorious invention of inneculation become worthless. The frequent use of tar water, tobacco infusions, solution of sulphate of iron and other substances used by gardeners and

farmers to destroy all kinds of insects, living organisms, which destroy their cabbage and potato fields, without injuring, in the least, any vegetable life thereby is a well known fact. I am desirous of mentioning in addition, the most remarkable effect of a few remedies as specifics, so far very little used by our profession. The medical profession and literature as much as I know never recognized tobacco as a therapeutic agent. I have used tobacco in form of distilled tobacco water, made from fresh tobacco leaves, and totally free from nicotine, many years ago, during two different cholera epidemics, with surprising success. One tablespoonful morning and night, during the existence of the disease, prophylactically used will be sufficient. During the attack of the disease, a table spoonful every one half hour or fifteen minutes will be necessary, but two or three doses generally restores the patient, if not in the state of collapse when he begins to take the tobacco water. Reports frequently received in this country by newspapers, from locations where cholera has been raging during the last two years, France, Italy and Spain, to a great extent sustain my former experience by stating repeatedly that to the general surprise, parties working in tobacco factories never, or seldom were attacked by the disease.

FORMULA FOR CHOLERA MIXTURE.

Aqua Nicotianæ Distil, 2 ounces.

Brandy $\frac{1}{2}$ ounce.

Tinc. Opii, 1 dram.

Tinc. Ginger or Capsicum, $\frac{1}{2}$ dram.

Glycerine, 2 dram.

Tablespoonful for adults and a teaspoonful for children.

About forty-five years ago appeared at certain places in Germany an epidemic, very fatal, with all the symptoms of Trichinosis, a disease at that time not at all known, and diagnosed as Cerebral or Rheumatic fever. I recollect distinctly that an old physician Dr. Radmaker, achieved an enormous reputation by the use of tobacco extract, with almost wonderful effect in that disease. I have never found a remedy which locally applied in form of poultice or injections, has given more relief from pain in cancer than tobacco. In conclusion I express the private opinion that our late President

General Grant would probably have become a victim to cancer much sooner, if he had not been such an habitual smoker. Permit me further to call your attention to the effect of Muriate of Lime, as a reliable specific in Carbuncle. Formula:

Muriate of Lime, 2 ounces,

Champhor Water, 4 ounces,

Myrrh Tinc., 2 drams,

Creosote, 1 scruple,

Glycerine, 1 ounce.

Constant application in the form of wet compresses will positively remove the most excruciating pain in from about three to four hours, and will make any medical treatment absolutely unnecessary in from eight to ten days.

The large experience derived from nearly 36 years' active practice in Hospitals and Army services entitles me, I think, to some confidence, and my article to a close reading and reflection. I have no other object or desire in view, than to urge the medical profession to investigate, and if possible to confirm the results of my experience.

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